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GRIP FOR HAND HELD INSTRUMENTS

This invention relates to a novel hand grip for tools held between the fore finger, middle finger and thumb in the manner of a writing instrument.

Pens, pencils and other tools held in the same manner are commonly cylindrical in shape, and dimensioned to fit between the digits. However, in use such items can cause discomfort, due to the digits being pressed up against the cylindrical shape for a prolonged period.

It is known to provide a more ergonomically shaped grip section for a writing implement. Common examples comprise a tapered grip section, or a padded resilient grip section. The present invention is intended to provide a novel approach.

When an individual learns to write, it is important to learn to grip the writing instrument in the traditional way. However, writing implements can be gripped in multiple ways, which can lead to confusion and/or the adoption of an incorrect writing style.

Further, particular writing instruments must be held at a particular rotation, for example a fountain pen which must have the tip of the nib placed squarely onto the writing surface. In addition, a "carpenter's pencil" which has an irregularly shaped lead cross-section, for example a rectangle, must be held at a certain rotation in order to write in a particular manner, for example in a classical style with a broad down stroke and a narrow cross stroke. If instruments like those described are held at an incorrect rotation it can lead to damage to the instrument or an undesired writing result.

The present invention is also intended to overcome some of these problems.

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According to the present invention a hand held instrument adapted to be held in use between a user's fore finger, middle finger and thumb in the manner of a writing instrument, comprises an instrument grip provided with a substantially triangular cross-section, in which a first side and a second side of the cross-section are provided with a concavity adapted to receive a portion of either the user's fore finger or thumb in use, in which the grip is provided with the same cross-section along its longitudinal axis.

Preferably the instrument grip may be dimensioned to fit inside the substantially triangular aperture in which a first side and a second side are concave, which is formed by portions of the user's fore finger, middle finger and thumb when they are held together in a manner suitable to grip a writing instrument. Therefore, the instrument grip is preferably smaller in size than a conventional writing instrument.

In a preferred construction the concavities can extend along the whole of the first and second sides of the triangle, and are shaped and dimensioned to substantially correspond to the curvature of the underside of the fore finger and thumb.

In one construction the instrument may be a writing instrument. It will be appreciated that the instrument can be any implement which is held in the manner of a writing instrument.

Preferably the third side of the triangle can be substantially flat, so it can be rested on the side of the middle finger in use. This arrangement is suited to constructions in which the instrument must be held a particular way up, for example a fountain pen or a carpenter's pencil, because the grip can only be held comfortably with the first and second sides uppermost. It will be appreciated that it will be immediately clear to the user of the instrument if it is not held at the correct rotation because it will be uncomfortable to use. This embodiment can also be used with

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other tools, for example surgical instruments, which may also need to be held at a particular rotation.

In a preferred embodiment when the third side of the triangle is rested on the middle finger in use, the active surface or point of the tool can be the correct way up. For example, if it is desired to write in a classical style with a carpenter's pencil, the flat side may be substantially parallel with the broad surface of the lead in the pencil.

However, in an alternative construction the first, second and third sides of the triangle can be provided with a curved recess, so that the tool can be held comfortably any way up.

It will be appreciated that the user can have hands of any size, and therefore the instrument can be provided in a number of dimensions to suit any user from a child to an adult.

The invention can be performed in various ways but one embodiments will now be described by way of example, and with reference to the accompanying drawings, in which:

Figure 1 is a cross-sectional front view of a pen according to the present invention;

and,

Figure 2 is a front view of the pen shown in Figure 1 in use.

As shown in Figure 1 a hand held instrument adapted to be held in use between a user's fore finger, middle finger and thumb in the manner of a writing instrument. In the form of ink pen 1, comprises an instrument grip 2 provided with a triangular cross-section, in which a first side 3 and a second side 4 of the cross-section are provided with a concavity adapted to receive a portion of either the user's

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fore finger 5 or thumb 7 in use. As is clear from Figures 1 and 2 the grip 2 has the same cross-section along its longitudinal axis, and does not increase or decrease in size along this axis.

As is shown in the Figures, the whole of the first side 3 and the second side 4 are shaped as concavities.

The third side 8 of the triangular cross-section is flat, and the first and second sides 3 and 4 are shaped to receive the physical shape of the fore finger 5 and the thumb 7.

Therefore, as shown in Figure 2, the instrument grip 2 is adapted to be held in use between the fore finger 5 and thumb 7 in the traditional way, with the third side 8 seated on the side 9 of the middle finger 6. The ink pen is provided with an ink cartridge 1a.

As is shown in Figure 2, the instrument grip 2 is dimensioned to fit inside a substantially triangular aperture in which a first side and a second side are concave, which is formed by portions of the user's fore finger 5, middle finger 6 and thumb 7 when they are held together in a manner suitable to grip a writing instrument.

Thus, when the ink pen 1 is gripped for use, the fore finger 5 and thumb 6 are not misshaped under the pressure of the user's grip.

It will also be appreciated that the ink pen 1 can only be gripped comfortably in the traditional manner between the fore finger 5, middle finger 6 and thumb 7. Therefore, the ink pen 1 can be used as a tool to teach the correct method of holding an instrument for writing.

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Further, the embodiment described can be used with ink pens or other instruments which must be held at a particular rotation, for example a fountain pen or a carpenter's pencil.

In a further embodiment, not shown, a writing instrument is substantially the same shape as the pen 1 shown in Figures 1 and 2, but is dimensioned to be used by a child.

In a further embodiment, not shown, a writing instrument is provided with a concavity on all three sides of the triangular grip, so it can be held comfortably any way up.

Thus, a tool which is held in the manner of a writing instrument is provided which can be used without causing discomfort to the digits. Further, a teaching implement is provided which can be used to teach the correct method to hold a writing instrument, or any other implement. In addition, a tool grip is provided which can be used to correctly orientate an instrument which must be held at a particular rotation for use.

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